**Claim Rejections - 35 U.S.C. §102**

Claims 1-7 and 9-10 are rejected under 35 U.S.C. §102(b) as being anticipated by Abusleme et al. (U.S. Patent No. 5,498,680) (hereinafter "Abusleme I").

Applicants respectfully disagree. The present invention in a preferred embodiment is concerned with a process for the synthesis of chlorotrifluoroethylene (PCTFE) (co)polymers, containing at least 80% by moles of CTFE, the complement to 100 being one or more fluorinated monomers in aqueous emulsion, in the presence of a microemulsion of (per)fluoropolyoxyalkylenes, a fluorinated surfactant and an inorganic initiator. The fluorinated surfactant has formula: $R_f - X^-M^+$ wherein $R_f$ is a $C_5$-$C_{14}$ (per)fluoroalkyl chain, or a (per)fluoropolyoxyalkylene chain, $X^-$ is $-COO^-$ or $-SO_3^-$, $M^+$ is $Na^+$ or $K^+$. The initiator is a potassium and/or sodium persulphate. The temperature is in the range of 0°C - 150°C and pressure is in the range of 3 - 80 bar.

Applicants urge that no such invention is taught or suggested in the prior art. In contrast to the present invention, the Abusleme I reference discloses a polymerization process of one or more fluorinated olefinic monomers, optionally with non-fluorinated olefins, in the presence of a microemulsion of fluoropolyoxyalkylenes, a fluorinated surfactant and an initiator. Abusleme I therefore discloses a polymerization process of one or more fluorinated monomers that include chlorotrifluoroethylene and fluorinated monomers, in the presence of a microemulsion of a perfluoropolyoxyalkylene, fluorinated surfactant and initiator. However, the claimed invention clearly differs from Abusleme I in that both the fluorinated surfactant and the initiator are salified with sodium or potassium. No teaching or suggestion of the combination of surfactant and initiator both salified with Na or K is found in the Abusleme I reference.

Applicants point out in particular that the claimed process uses a specific surfactant defined by formula $R_f$-$X^-M^+$, wherein $M^+ = Na^+$ or $K^+$; $X^- = -COO^-$ or $SO_3^-$; $R_f$ = perfluoroalkyl or perfluoropolyoxyalkylene chain, as well as a specific initiator which is a persulphate salified with Na or K. Such a combination of initiator and surfactant results in a CTFE (co)polymer showing no discoloration, reduced weight loss at high working temperature and reduced residue on reactor walls (see page 7, lines 4-7 of the specification). In contrast, Abusleme I simply discloses that the initiator can be indifferently selected from inorganic peroxides (e.g., ammonium, alkali metal persulphate), organic peroxides (e.g., disuccinylperoxide, terbutyl-hydroperoxide) and organic/inorganic redox systems. Abusleme I also discloses that fluorinated surfactants can be indifferently selected from perfluorocarboxylic or perfluorosulphonic acid $C_5$-$C_{11}$ and salts thereof, mono- or bi-carboxylic acid deriving from perfluoropolyoxyalkylenes and salts thereof, non-ionic surfactants, and cationic surfactants having one or more perfluoroalkyl and/or perfluoropolyoxyalkylene chains. Applicants even point out that the reference Abusleme et al. (U.S. Patent No. 6,096,795), not cited in the Office Action, discloses only the same fluorinated surfactants as the Abusleme I reference, while disclosing that the initiator can be indifferently selected from inorganic peroxides (e.g., potassium or ammonium persulphate), organic peroxides, di- or poly-ketones, transition metal complexes and halogenated or polyhalogenated organic compounds. In other words, no cited reference teaches or suggests the combination of persulphate initiator and surfactant of the claimed formula, both salified with Na or K, as required by the claimed invention. Applicants urge withdrawal of the rejection.

**Claim Rejections - 35 U.S.C. §103**

Claims 1-6 and 8-10 are rejected under 35 U.S.C. §103(a) as being obvious over DeSimone et al. (U.S. Patent No. 5,672,667) in view of Abusleme I.

Applicants respectfully disagree as the claimed invention is not taught or suggested by any combination of the DeSimone et al. and Abusleme I references. DeSimone et al. discloses the polymerization of fluorinated monomers, in an aqueous emulsion in the presence of $CO_2$. However, DeSimone et al. contains no teaching or suggestion that $CO_2$ could be replaced by a microemulsion of (per)fluoropolyoxyalkylenes. DeSimone et al. also fails to teach or suggest the claimed surfactant, the initiator as a persulphate, and both the surfactant and initiator salified with Na or K. Of course, Abusleme I is unable to cure the deficiencies of DeSimone et al. Applicants note in particular that, as discussed above, the Abusleme I reference is unable to teach or suggest the combination of surfactant and initiator required by the claimed invention.

Applicants further point out that the claimed invention is capable of providing for unexpected advantages not found in the prior art. The unexpected advantages arising from a persulphate in combination with a surfactant of formula (I), both salified with Na or K, reside in obtaining a polymer showing no discoloration and a lower weight loss at high working temperature as compared to that obtained using different combinations of surfactant and initiator (see Example 1). No combination of DeSimone et al. and Abusleme I teach or suggest such unexpected and surprising advantages. That is, the cited references contain no teaching or suggestion with respect to obtaining an improved CTFE showing no discoloration and reduced weight loss. Accordingly, in that the cited references are unable to teach or suggest each and every element of the claimed invention, much less the unexpected advantages obtained by the claimed invention, Applicants urge withdrawal of all rejections.

In view of the amendments and remarks above, Applicants submit that this application is in condition for allowance and requests favorable action thereon.

In the event this paper is not considered to be timely filed, Applicants hereby petition for an appropriate extension of time. The fee for this extension may be charged to our Deposit Account No. 01-2300. The Commissioner is hereby authorized to charge any fee deficiency or credit any overpayment associated with this communication to Deposit Account No. 01-2300, referencing Attorney Docket No. 108910-00011.

Respectfully submitted,

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HJC:kga

Enclosure: Marked-Up Copy of Claim Amendments

## MARKED-UP COPY OF CLAIM AMENDMENTS

**1 (Amended).** A process for the synthesis of chlorotrifluoroethylene (PCTFE) (co)polymers, containing at least 80% by moles of CTFE, the complement to 100 being one or more fluorinated monomers in aqueous emulsion, in the presence of a [reaction medium] microemulsion of (per)fluoropolyoxyalkylenes, a fluorinated surfactant and an inorganic initiator, [characterized in that the reaction medium comprises (per)fluoropolyoxyalkylene microemulsions] wherein the fluorinated surfactant [is salified with sodium and/or potassium] has formula:

$$R_f - X^-M^+$$

wherein $R_f$ is a $C_5$-$C_{14}$ (per)fluoroalkyl chain, or a (per)fluoropolyoxyalkylene chain, $X^-$ is $-COO^-$ or $-SO_3^-$, $M^+$ is $Na^+$ or $K^+$, and the initiator is a potassium and/or sodium persulphate [as inorganic initiator], wherein temperature is in the range of 0°C - 150°C and pressure is in the range of 3 - 80 bar.